Author Index of Volume 163

Abeels, V. M. F., 115 Akaishi, K., 177 Alberdi, A., 197

Ballhause, P., 193
Bangert, H., 43
Benda, M., 181
Bláhová, O., 211
Blankenship, Jr., C. P., 1
Brindley, W. J., 33
Bunshah, R. F., 207

Calvo, J., 197 Čerstvý, R., 181 Cha, Y. H. C., 207 Cooper, G. A., 23 Crampon, J., L5

Doerr, H. J., 207 Duclos, R., L5 de Segovia, J. L., 197

Fancey, K. S., 171 Funato, Y., 177

Gibson, L. J., 51 Goedicke, K., 149

Han, S. Z., 81 Hayashi, C., 157 Hensel, B., 193 Higuchi, K., 201 Hood, M., 23 Hsueh, C. H., L1 Huang, J. S., 51

James, A. S., 171 Ježek, V., 181 Jou, S., 207

Kajioka, H., 163, 201 Kashu, S., 157 Kasl, J., 211 Kattamis, T. Z., 107 Kawabata, K., 163 Kawashimo, Y., 201 Kim, N. J., 11 Kim, Y. J., 127 Kiyota, T., 167 Kolega, M., 181, 211 Kubásek, M., 181 Kubota, Y., 177

Laucirica, J., 197 Lee, H., 81 Lee, H. M., 81 Lee, S., 11 Lee, Z. H., 81 Li, G., 73 Li, Z., 73 Lin, T. P., 23

Matthews, A., 171 Metzner, C., 149 Middleman, S., 135 Mori, T., 177 Motojima, O., 177 Mushiaki, M., 177 Musil, J., 181, 211 Musil, Jr., J., 181, 211

Naruse, F., 157

Oda, M., 157 Orlová, A., 61 Ovid'ko, I. A., 67

Peng, D., 73 Peni, F., L5 Perepezko, J. H., 127 Prakash, S., 207

Qin, Y., 73

Román, E., 197 Rost, A., 193 Schiller, S., 149 Schussler, H., 193 Shen, H., 73 Skolianos, S., 107 Sohn, K. S., 11 Sproul, W. D., 187 Starink, M. J., 115 Starke, Jr., E. A., 1 Štěpănek, I., 211 Sugamata, M., 1 Suzuki, T., 91, 99

Takata, K., 91, 99 Tamagawa, K. 167 Tanaka, T., 163 Tölg, T., 181 Toyoda, S., 167

Vlček, J., 181 Vyskočil, J., 211 van Mourik, P., 115

Wang, H. F., 43 Wendler, B., 215 Whittenberger, J. D., 33 Wu, X., 73

Yamakawa, H., 167 Young, S. J., 171

Zhang, S., 141

Subject Index of Volume 163

Alloys

coarsening behavior of L1₂ precipitates in melt-spun Al-Ti-V-Zr alloys, 81

in situ observation of microfracture processes in an 8090 Al-Li alloy plate, 11

lattice parameter and hardness variations resulting from precipitation and misfit accommodation in a particle-reinforced Al-Si-Cu-Mg alloy, 115

predicting plane strain fracture toughness of Al-Li-Cu-Mg alloys, 1

stress relaxation of low pressure plasma-sprayed NiCrAlY alloys, 33

the thermodynamics and competitive kinetics of metastable τ phase development in MnAl-base alloys, 127

tribological properties of SiC_p-reinforced Al-4.5%Cu-1.5%Mg alloy composites, 107

Aluminium

coarsening behavior of L1₂ precipitates in melt-spun Al-Ti-V-Zr alloys, 81

evaluation of properties of aluminum films deposited using ultrahigh vacuum sputtering system, 167

in situ observation of microfracture processes in an 8090 Al-Li alloy plate, 11

lattice parameter and hardness variations resulting from precipitation and misfit accommodation in a particle-reinforced Al-Si-Cu-Mg alloy, 115

predicting plane strain fracture toughness of Al-Li-Cu-Mg alloys, 1

stress relaxation of low pressure plasma-sprayed NiCrAlY alloys, 33

the thermodynamics and competitive kinetics of metastable τ phase development in MnAl-base alloys, 127

tribological properties of SiC_p-reinforced Al-4.5%Cu-1.5%Mg alloy composites, 107

Amorphization

dislocations, amorphization and plastic deformation in quasi-crystalline materials, 67

Bending

materials and cross-sectional shapes for bending stiffness, 51

Bicrystals

fractography of embrittled copper bicrystals, 73

LaB₆ coating to reduce the outgassing rate of a vacuum wall, 177

synthesis of β -SiC thin films for high temperature sensors by the activated reactive evaporation process, 207

the role of gas-phase reactions in boron nitride growth by chemical vapor deposition

Carbon

comparative study of the interface composition of TiN and TiCN hard coatings on high speed steel substrates obtained by arc discharge, 197

creation of thin TaC or TiC layers on steels, 215

synthesis of β -SiC thin films for high temperature sensors by the activated reactive evaporation process, 207

titanium carbonitride-based cermets: processes and properties, 141

tribological properties of SiC_p-reinforced Al-4.5%Cu-1.5%Mg alloy composites, 107

Cathodic arc evaporation

properties of TiN, ZrN and ZrTiN coatings prepared by cathodic arc evaporation, 211

Cermets

titanium carbonitride-based cermets: processes and properties, 141

Chemical vapour deposition

the role of gas-phase reactions in boron nitride growth by chemical vapor deposition, 135

Chromium

 CrN_x – a hard coating for corrosion and wear resistance, 193

stress relaxation of low pressure plasma-sprayed NiCrAlY alloys, 33

Coating

three-dimensional finite element simulation of Vickers indentation on coated systems, 43

CrN_x - a hard coating for corrosion and wear resistance,

LaB₆ coating to reduce the outgassing rate of a vacuum wall, 177

plasma-activated high-rate electron-beam evaporation for coating metal strips, 149

properties of TiN, ZrN and ZrTiN coatings prepared by cathodic arc evaporation, 211

the microstructural and thickness uniformity of zirconia coatings produced by r.f. ion plating, 171

the use of nanoparticles for coatings, 157

Composites

an estimate of internal stress evolution in the primary creep based on the composite model of dislocation structure, 61

on the morphology and composition of the oxidized layer in Si₃N₄-based materials, L5

Copper

fractography of embrittled copper bicrystals, 73

lattice parameter and hardness variations resulting from precipitation and misfit accommodation in a particle-reinforced Al-Si-Cu-Mg alloy, 115

predicting plane strain fracture toughness of Al-Li-Cu-Mg alloys, 1

tribological properties of SiC_p-reinforced Al-4.5%Cu-1.5%Mg alloy composites, 107

Corrosion

 CrN_x – a hard coating for corrosion and wear resistance, 193

Creer

an estimate of internal stress evolution in the primary creep based on the composite model of dislocation structure, 61

Debonding

embedded-end debonding during fiber pull-out,

Deformation

dislocations, amorphization and plastic deformation in quasi-crystalline materials, 67

Diamond

fatigue test on polycrystalline diamond compacts, 23 Dislocation

an estimate of internal stress evolution in the primary creep based on the composite model of dislocation structure, 61

dislocations, amorphization and plastic deformation in quasi-crystalline materials, 67

Embrittlement

fractography of embrittled copper bicrystals, 73

Evaporation

plasma-activated high-rate electron-beam evaporation for coating metal strips, 149

synthesis of β -SiC thin films for high temperature sensors by the activated reactive evaporation process, 207

Fatigue

fatigue test on polycrystalline diamond compacts, 23 Fibres

embedded-end debonding during fiber pull-out, L1 Film deposition

evaluation of properties of aluminum films deposited using ultrahigh vacuum sputtering system, 167

Finite element simulation

three-dimensional finite element simulation of Vickers indentation on coated systems, 43

Fractography

fractography of embrittled copper bicrystals, 73

Fracture toughness

predicting plane strain fracture toughness of Al-Li-Cu-Mg alloys, 1

Gas phase

the role of gas-phase reactions in boron nitride growth by chemical vapor deposition, 135

Hardness variations

lattice parameter and hardness variations resulting from precipitation and misfit accommodation in a particle-reinforce Al-Si-Cu-Mg alloy, 115

Hydrogen

permeation of hydrogen in vanadium
I. Experimental details, 91

permeation of hydrogen in vanadium

II. Theoretical details, 99

Interfaces

comparative study of the interface composition of TiN and TiCN hard coatings on high speed steel substrates obtained by arc discharge, 197

Ion deposition

ion-assisted deposition in unbalanced-magnetron sputtering systems, 187

Ion plating

morphology of TiN films deposited by arc-like plasmaenhanced ion plating, 201

the microstructural and thickness uniformity of zirconia coatings produced by r.f. ion plating, 171

Lanthanum

LaB₆ coating to reduce the outgassing rate of a vacuum wall, 177

Lithiun

in situ observation of microfracture processes in an 8090 Al-Li alloy plate, 11

predicting plane strain fracture toughness of Al-Li-Cu-Mg alloys, 1

Magnesium

lattice parameter and hardness variations resulting from precipitation and misfit accommodation in a particle-reinforced Al-Si-Cu-Mg alloy, 115

predicting plane strain fracture toughness of Al-Li-Cu-Mg alloys, 1

tribological properties of SiCp-reinforced Al-4.5%Cu-1.5%Mg alloy composites, 107

Manganese

the thermodynamics and competitive kinetics of metastable τ phase development in MnAl-base alloys, 127

Melt-spinning

coarsening behavior of L1₂ precipitates in melt-spun Al-Ti-V-Zr alloys, 81

Metal strips

plasma-activated high-rate electron-beam evaporation for coating metal strips, 149

Microfracture processes

in situ observation of microfracture processes in an 8090 Al-Li alloy plate, 11

Molybdenum

preparation of W and Mo thin films by r.f.-d.c. coupled magnetron sputtering, 163

Morphology

on the morphology and composition of the oxidized layer in Si₃N₄-based materials, L5

Nanoparticles

the use of nanoparticles for coatings, 157

Nickel

stress relaxation of low pressure plasma-sprayed NiCrAlY alloys, 33

Nitrogen

comparative study of the interface composition of TiN and TiCN hard coatings on high speed steel substrates obtained by arc discharge, 197

CrN_x — a hard coating for corrosion and wear resistance, 193

morphology of TiN films deposited by arc-like plasmaenhanced ion plating, 201

on the morphology and composition of the oxidized layer in Si_3N_4 -based materials, L5

properties of TiN, ZrN and ZrTiN coatings prepared by cathodic arc evaporation, 211

the role of gas-phase reactions in boron nitride growth by chemical vapor deposition, 135

titanium carbonitride-based cermets: processes and properties, 141

Outgassing rate

LaB₆ coating to reduce the outgassing rate of a vacuum wall, 177

Oxidized layers

on the morphology and composition of the oxidized layer in Si₃N₄-based materials, L5

Plasma nitriding

plasma nitriding of sputtered Ti films, 181

Permeation

permeation of hydrogen in vanadium

I. Experimental details, 91

permeation of hydrogen in vanadium

II. Theoretical details, 99

Plasma activation

plasma-activated high-rate electron-beam evaporation for coating metal strips, 149

Plasma enhancement

morphology of TiN films deposited by arc-like plasmaenhanced ion plating, 201

Plasma spraying

stress relaxation of low pressure plasma-sprayed NiCrAlY alloys, 33

Plastics

dislocations, amorphization and plastic deformation in quasi-crystalline materials, 67

Polycrystals

fatigue test on polycrystalline diamond compacts, 23

Quasicrystals

dislocations, amorphization and plastic deformation in quasi-crystalline materials, 67

Resistance

CrN_x - a hard coating for corrosion and wear resistance, 193

Sensors

synthesis of β -SiC thin films for high temperature sensors by the activated reactive evaporation process, 207

Silicon
lattice parameter and hardness variations resulting from
precipitation and misfit accommodation in a particlereinforced Al-Si-Cu-Mg alloy, 115

on the morphology and composition of the oxidized layer in Si₃N₄-based materials, L5

synthesis of β -SiC thin films for high temperature sensors by the activated reactive evaporation process, 207

tribological properties of SiC_p-reinforced Al-4.5%Cu-1.5%Mg alloy composites, 107

Sputtering

evaluation of properties of aluminum films deposited using ultrahigh vacuum sputtering system, 167

ion-assisted deposition in unbalanced-magnetron sputtering systems, 187

plasma nitriding of sputtered Ti films, 181

preparation of W and Mo thin films by r.f.-d.c. coupled magnetron sputtering, 163

Steel

comparative study of the interface composition of TiN and TiCN hard coatings on high speed steel substrates obtained by arc discharge, 197

creation of thin TaC or TiC layers on steels, 215

Stiffness

materials and cross-sectional shapes for bending stiffness, 51

Stress

an estimate of internal stress evolution in the primary creep based on the composite model of dislocation structure, 61 **Tantalum**

creation of thin TaC or TiC layers on steels, 215

Thin films

creation of thin TaC or TiC layers on steels, 215 preparation of W and Mo thin films by r.f.-d.c. coupled magnetron sputtering, 163

synthesis of β -SiC thin films for high temperature sensors by the activated reactive evaporation process, 207

Titanium

coarsening behavior of L1₂ precipitates in melt-spun Al-Ti-V-Zr alloys, 81

comparative study of the interface composition of TiN and TiCN hard coatings on high speed steel substrates obtained by arc discharge, 197

creation of thin TaC or TiC layers on steels, 215

morphology of TiN films deposited by arc-like plasmaenhanced ion plating, 201

plasma nitriding of sputtered Ti films, 181

properties of TiN, ZrN and ZrTiN coatings prepared by cathodic arc evaporation, 211

titanium carbonitride-based cermets: processes and properties, 141

Tungsten

preparation of W and Mo thin films by r.f.-d.c. coupled magnetron sputtering, 163

 τ phase

the thermodynamics and competitive kinetics of metastable τ phase development in MnAl-base alloys, 127

Vacuum

evaluation of properties of aluminum films deposited using ultrahigh vacuum sputtering system, 167

LaB₆ coating to reduce the outgassing rate of a vacuum wall, 177

Vanadium

coarsening behavior of L1₂ precipitates in melt-spun Al-Ti-V-Zr alloys, 81

permeation of hydrogen in vanadium

I. Experimental details, 91

permeation of hydrogen in vanadium

II. Theoretical details, 99

Vickers indentation

three-dimensional finite element simulation of Vickers indentation on coated systems, 43

Wear

CrN_x – a hard coating for corrosion and wear resistance, 193

Yttrium

stress relaxation of low pressure plasma-sprayed NiCrAlY alloys, 33

Zirconia

the microstructural and thickness uniformity of zirconia coatings produced by r.f. ion plating, 171

Zirconium

coarsening behavior of L1₂ precipitates in melt-spun Al-Ti-V-Zr alloys, 81

properties of TiN, ZrN and ZrTiN coatings prepared by cathodic arc evaporation, 211

